

Claims

1. Self-propelled road milling machine comprising a machine chassis (2), inside of which a milling roll (4) is rotationally mounted between lateral plates (12,13) that are orthogonal to the axis of the milling roll (4), the milling roll (4), which has a roll base body (14) and a milling tube (10), being adapted to be driven via a drive means (6) which is supported on the exterior of the input-side lateral plate (12) and via a reduction gear unit (8), and the lateral plate (13) situated opposite the input-side lateral plate (12) being easily detachable for exchanging alternatively mountable milling tubes (10) of different milling widths and defining the null side of the machine (1) against which one face of the milling roll (4) abuts in an approximately flush manner to enable a milling that is near to an edge,
c h a r a c t e r i z e d i n
that the reduction gear unit (8) is mounted on the drive input side,
that the reduction gear unit (8) comprises a drive output element, which is mounted on the interior of the drive input-side lateral plate (12) and whose shell surface (25) forms a seat for milling tube elements that can be slid thereon from the null side, and
that the roll base body (14) is coupled to the reduction gear unit (8) at the free front face (23) of the drive output element without hindering the milling tube elements in being slid on.
2. Self-propelled road milling machine according to claim 1, characterized in that the milling tube elements consist of the ends of the milling tubes (10) directed to the drive input side or of the radial supporting means for the milling tubes (10) and/or tubular protection means for the output element.

3. Self-propelled road milling machine according to claim 2, characterized in that the milling tubes (10) and/or the radial supporting means for the milling tubes (10) and/or the tubular protection means are integrally formed.
4. Self-propelled road milling machine according to claim 1 to 3, characterized in that the drive output element has a circularly cylindrical cross-sectional shape.
5. Self-propelled road milling machine according to one of claims 1 to 4, characterized in that the drive output element consists of a housing (26) of the reduction gear unit (8).
6. Self-propelled road milling machine according to one of claims 1 to 5, characterized in that the roll base body (14) has a maximum outer diameter that is not greater than the outer diameter of the output element (26).
7. Self-propelled road milling machine according to one of claims 1 to 6, characterized in that the output element is able to receive tubular or annular radial supporting and/or protection means on at least a part of the entire axial length.
8. Self-propelled road milling machine according to one of claims 1 to 7, characterized in that the radial supporting means form a movable bearing for the milling tube (10) on the output element (26).
9. Self-propelled road milling machine according to one of claims 1 to 8, characterized in that a centering means (27) for the roll base body (14) is arranged at the face side of the housing (26).

10. Self-propelled road milling machine according to one of claims 1 to 9, characterized in that the free end of the roll base body (14) is supported in the easily dismountable lateral plate (13) on one side opposite the input-side lateral plate (12).
11. Self-propelled road milling machine according to one of claims 1 to 10, characterized in that a protection tube (30) covering the output element is mounted to the radial supporting means (29) for the milling tube (10) as a protection means.
12. Self-propelled road milling machine according to one of claims 5 to 10, characterized in that the housing (26) serving as the output element has an outer diameter of 400 mm at maximum, preferably of 350 mm at maximum.
13. Self-propelled road milling machine according to one of claims 1 to 12, characterized in that the roll base body (14) comprises a first face-side annular flange (15) being adapted to be axially coupled to the face of the drive output element from the null side as well as a second annular flange (17) radially seated on the roll base body (14) for rotation therewith, which is adapted to be axially coupled with a supporting means (19) projecting radially inward from the milling tube (10).
14. Self-propelled road milling machine according to one of claims 1 to 13, characterized in that a radial supporting ring (29) is arranged as a supporting means for the milling tube (10) at the face-side end of the milling tube (10) and is coaxially seated with a positive fit on the drive output element.

15. Self-propelled road milling machine according to one of claims 1 to 14, characterized in that the reduction gear unit (8) comprises at least one reduction stage in an input-side gear unit portion (8a) at the site of coupling (18) to the drive means (6) and at least one further reduction stage in a milling roll-side gear unit portion (8b) surrounded by the housing (26).
16. Self-propelled road milling machine according to claim 15, characterized in that the at least one input-side reduction unit (22) is arranged so as to be axially offset with respect to the at least one milling roll-side reduction stage (24).
17. Self-propelled road milling machine according to one of claims 15 or 16, characterized in that the at least one input-side reduction stage (22) is arranged on the side of the input-side lateral plate (12) of the machine chassis (2), which is opposite to the milling roll (4).
18. Self-propelled road milling machine according to one of claims 15 to 17, characterized in that the at least one input-side reduction stage (22) is coupled with the at least one further reduction stage (24) via a gear shaft (28).
19. Self-propelled road milling machine according to one of claims 1 to 18, characterized in that the easily dismountable lateral plate (13) is pivotable to change the milling tubes (10).